

IN THE CLAIMS:

1. (currently amended) A method of performing magnetic resonance imaging (MRI) comprising:
 - receiving timing information from an implantable medical device (IMD) wherein the timing information relates to at least one of cardiac therapy delivery and cardiac activity sensing; and
 - performing the MRI based on the timing information.
2. (currently amended) The method of claim 1, wherein the timing information includes sensed conditions measured by the IMD.
3. (original) The method of claim 2, further comprising sensing conditions of a patient with the IMD.
4. (currently amended) The method of claim 1, wherein the timing information defines a timing of stimulation pulses applied to a patient by the IMD.
5. (currently amended) The method of claim 1, further comprising stimulating a patient with the IMD, wherein the received-timing information defines a timing of the stimulation applied to the patient by the IMD.
6. (original) The method of claim 5, further comprising stimulating the patient with the IMD to induce an arrhythmia during the MRI.
7. (currently amended) The method of claim 1, wherein the IMD is a pacemaker and wherein the timing information defines a timing of a cardiac cycle.
8. (currently amended) The method of claim 1, wherein performing the MRI includes applying one or more electromagnetic radiation bursts based on the timing information.

9. (currently amended) The method of claim 1, wherein performing the MRI includes applying one or more gradient magnetic fields based on the timing information.

10. (currently amended) A method of performing magnetic resonance imaging (MRI) comprising:
stimulating a patient with an implantable medical device (IMD);
communicating timing information indicative of a timing of the stimulation;
and
performing the MRI based on the timing information.

11. (currently amended) The method of claim 10, further comprising:
sensing conditions of the patient with the IMD;
communicating timing information indicative of the sensed conditions; and
performing the MRI based on the information indicative of one of the a timing information of the stimulation and the timing information indicative of the sensed conditions.

12. (currently amended) The method of claim 10, wherein the timing information is communicated from the IMD.

13. (currently amended) The method of claim 10, wherein the timing information is communicated to the IMD.

14. (currently amended) A method of performing magnetic resonance imaging (MRI) comprising:
sending timing information to an implantable medical device (IMD) to define operation of the IMD during an MRI procedure; and
performing the MRI procedure in coordination and without deleteriously interacting with the operation of the IMD, based at least in part upon the timing information.

15. (currently amended) The method of claim 14, wherein the timing information defines a timing for application of stimulation pulses by the IMD.

16. (currently amended) (currently amended) A magnetic resonance imaging (MRI) device comprising:

a magnet to generate a magnetic field;

an electromagnetic radiation source to apply electromagnetic radiation bursts;

an imaging unit to generate images of patient following application of radiation bursts;

a receiver to receive timing information from an implantable medical device (IMD) relating to one of the application of an IMD therapy to a patient and the receipt of sensed physiologic signals of the patient; and

a control unit to coordinate application of the electromagnetic radiation bursts based on the timing information.

17. (currently amended) The MRI device of claim 16, wherein the received timing information includes an indication of sensed conditions measured by the IMD.

18. (currently amended) The MRI device of claim 17, wherein the received timing information includes an indication of one or more stimulations applied by the IMD.

19. (currently amended) A medical device comprising:

a control unit to temporally coordinate application of magnetic resonance imaging (MRI) electromagnetic radiation bursts with operation of an implantable medical device (IMD); and

a transmitter to transmit timing information to the IMD to cause the IMD to operate in temporal coordination with an MRI device.

20. (original) The medical device of claim 19, wherein the medical device comprises a programmer for the IMD.

21. (original) The medical device of claim 19, wherein the medical device comprises the MRI device.

22. (currently amended) A system comprising:

a magnetic resonance imaging (MRI) device to image a patient using by applying a plurality of electromagnetic radiation bursts; and

an implantable medical device (IMD), wherein application of the plurality of electromagnetic radiation bursts by the MRI device is temporally coordinated with operation of the IMD.

23. (original) The system of claim 22, further comprising a programmer to coordinate operation of the IMD with the MRI device.

24. (currently amended) The system of claim 22, wherein the implantable medical device senses conditions of the patient and transmits timing information to the MRI device indicative of the sensed conditions, and wherein the MRI device applies the electromagnetic radiation bursts based on the timing information.

25. (currently amended) The system of claim 22, wherein the implantable medical device stimulates the patient and transmits timing information to the MRI device indicative of the stimulation, and wherein the MRI device applies the electromagnetic radiation bursts based on the information.

26. (currently amended) An apparatus comprising:

means for receiving timing information from an implantable medical device (IMD); and

means for performing magnetic resonance imaging (MRI) based on the information.